

ANNEX B: Summary of peer reviewer comments and Nutrient Profiling Model expert group responses on the 2018 review of the UK Nutrient Profiling Model

The 2018 review of the UK Nutrient Profiling Model was peer reviewed by the following 6 individuals:

- Annie Anderson: Professor of Public Health Nutrition, University of Dundee
- Lisa Anne Elvidge: Nutrition Officer, Health Canada
- Anne Heughan: Nutrition Consultant, Independent
- Dr Chantal Julia: Associate Professor Nutritional Epidemiology Research Team, University of Paris
- Janine Lewis: Principal Nutritionist, Food Standards Australia New Zealand
- Cliona Ni Mhurchu: Professor of Population Nutrition, University of Auckland

PHE would like to thank the peer reviewers for their comments. Table 1 summarises the anonymised comments from the peer reviewers and includes responses from the Nutrient Profiling Model (NPM) expert group. To anonymise comments a peer reviewer number has been allocated at random to the 6 peer reviewers listed above. The sequential list of named peer reviewers does not represent the order in which the comments are presented.

Please note: In a draft version of the 2018 Review of the UK NPM the revised model was called the 'modified NPM' this has since been replaced with 'draft 2018 NPM'.

Table 1: Summary of peer reviewer comments and NPM expert group responses on the 2018 review of the UK Nutrient Profiling Model

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
1. Do you have any comments on the development of the NPM test dataset?	1	1.1	The datasets used are clearly described although the number of foods in the Composition of Foods Integrated Dataset (CoFID) is not stated.	<i>Appendix: NPM test dataset – processes involved in its development</i> details the number of foods in the NPM test dataset from CoFID as n=521.
		1.2	The nature of the information provided by the Nielsen Brandbank (individual branded products sold on the market) and CoFID datasets (average data for generic foods) is very different. These datasets should therefore be used separately to a) discriminate variability in nutritional composition within a specific food category or between brands and b) to discriminate among generic unbranded products.	It is acknowledged the datasets are very different, however the aim of the test dataset is to reflect the most commonly consumed products by children. <i>Appendix: NPM test dataset – processes involved in its development</i> describes that the Kantar Worldpanel database was used to identify the most commonly consumed foods and drinks, which was then adjusted using the National Diet and Nutrition Survey data to reflect where children consumed certain foods and drinks more often than adults. The Nielsen Brandbank data was used to provide up to data nutrient information and where non-branded categories (eg fruit and vegetables) were required, data was imputed from CoFID.
		1.3	It would be of interest to include the number of imputed data for each of the nutrients in the model to grasp the completeness of the data source.	PHE currently does not have this information for all nutrients. It would be able to identify the number of adjustments Public Health England (PHE) imputed for free sugars, fruit vegetables and nuts (however, this would potentially underestimate the full level of imputation across the whole dataset). PHE will consider retrospectively identifying this information and adding at a later time point.
		1.4	The food and drink categories excluded from free sugars requires further clarification. For example, the text mentioning fruits and vegetables excluded is unclear and appears to contradict the definition used for free sugars.	The PHE working definition of free sugars described in table 1 of the <i>Appendix: NPM test dataset – estimating free sugars</i> has been separated out to make it clearer and improve understanding.
	2	1.5	It is not clear how the foods in the NPM test dataset were identified. For example, are these ALL foods consumed by children in survey data, top 30% consumed, or top 2620 most frequently consumed or something else? Has any testing been done on the more occasional foods (if there has been a selection criteria applied)?	The <i>Development of the NPM test dataset</i> section in <i>the Methods of the Review</i> has been made clearer by adding the following explanation 'The NPM test dataset consists of the most frequently purchased products at a household level after some adjustment for the likelihood of consumption of those products by children' to help explain how the foods and drinks in the test dataset were identified. The paragraph also makes reference to the <i>Appendix NPM test dataset – processes involved in its development</i> which contains further details of how the foods in the NPM test dataset were identified.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
	3	1.6	<p>It is unclear why Brandbank data were needed if Kantar data used (as Kantar holds nutritional information for all their products). Is this because Brandbank holds ingredient data too?</p> <p>Was a combination of both datasets used or was all the nutritional data used from Brandbank only? It appears a combination of sources were used but this is not explicit in the methods. A table of nutritional data sources would be helpful to show what proportions were derived from the different databases used and websites.</p>	<p>The Kantar Worldpanel data available to PHE did not contain nutrient information on fibre, protein and ingredient information. Therefore Kantar Worldpanel data was matched with Nielsen Brandbank to obtain the relevant data. The text in <i>Appendix: NPM test dataset – processes involved in its development</i> has been redrafted to further clarify the approach used.</p>
		1.7	<p>How often are the nutritional data in Brandbank updated? Was the data used derived from one year or multiple years? If the latter the full yearly range and the number of products per year is important – in order to understand how current (or not) these data are?</p>	<p>Product data, including nutrient data is updated when manufacturers alert (Nielsen) Brandbank that a product's content, composition or packaging has changed. This occurs on an ongoing basis and the most up-to-date nutrient data is provided by the manufacture at that point in time, for Brandbank to then code into their systems. New or updated product data received by Brandbank is subjected to its capture and approval process.</p> <p>The text in <i>Appendix: NPM test dataset – overview of data sources</i> has been updated to include this information and a note added to state that product data is also date stamped.</p>
		1.8	<p>How were the databases linked? What was the product match rate between Kantar and Brandbank?</p>	<p>The Fuzzy Lookup add-in function in Excel was used to link the databases. The product match rate between Kantar Worldpanel and Neilson Brandbank was set at 70% match quality.</p> <p>The text in <i>Appendix NPM test dataset – processes involved in its development</i> has been updated to provide this information.</p>
		1.9	<p>How many errors were found and corrected during the quality control check? This is important to ascertain how many errors are likely to have been present in the remaining 70% of products that were not checked.</p>	<p>The number of errors found and corrected during the quality control checks was not formally recorded. PHE will look to see if this information can be identified retrospectively.</p>
	6	1.11	<p>Strengths of the process used include the independent review of the datasets to ensure quality control and use of a variety of databases to obtain a broader range of foods within the dataset.</p>	<p>Noted.</p>
		1.12	<p>More information could be provided to explain upfront why many different databases of information were required. A more comprehensive visual that describes what information is taken from which database, and why, could form part of this.</p>	<p>The Kantar Worldpanel data available to PHE did not contain nutrient information on fibre, protein and ingredient information. Therefore, Kantar Worldpanel data was matched with Nielsen Brandbank so the relevant data could be obtained. Where non-branded categories (eg fruit and vegetables) were required, data was imputed from CoFID. The text in <i>Appendix: NPM test dataset – processes involved in its development</i> has been redrafted to further clarify the approach used. This is described in the <i>Development of the NPM test dataset</i> in the main text with fuller detail in the appendices. Adding the full detail into the main text was considered but discounted in order to improve readability.</p>
		1.13	<p>Questioned why the data from Kantar Worldpanel were adjusted for consumption by children. Alternative approaches to pair up brand name data with consumption data from surveys provided:</p> <ul style="list-style-type: none"> • pair up the most frequently reported foods among children from the National Diet and Nutrition Survey (NDNS) data with the most popular brand name equivalent in the sales data from Kantar • use similar methodology to test if the NPM test dataset is a good proxy of what children are consuming • ensure the top 100-500 foods reported in NDNS among children are represented in some form within the test dataset (or at least the top contributors by category) 	<p>There are a variety of approaches to produce test datasets and PHE believes the alternatives suggested by the reviewer would be valid. Given the difference in nutritional content across brands PHE felt it was more appropriate to identify the most sold items rather than start with survey data.</p>

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
		1.14	Further information on how non-standardised products were defined would be helpful (for example why cream is a non-standard product but milk is).	This was an error in the report which has been amended in <i>Appendix: NPM test dataset – processes involved in its development</i> . The term ‘non-standardised products’ has been removed. This was referring to foods/drinks categories missing from the Kantar Worldpanel 2015 dataset which were added from the Kantar Worldpanel 2014 dataset.
2. Does the NPM test dataset reflect a reasonable proxy for foods and drinks likely to be consumed by children?	1	2.1	It is unclear how the dataset actually covers a child’s diet – particularly as purchases in the Kantar database are made at household level. It is unclear whether the selection (though unit sales were adjusted) would actually reflect products eaten only by children. Most probably, foods eaten by adults appear on the dataset. This is not itself a problem provided that no foods likely to be eaten by children are overlooked. To guard against this, the dataset could be compared with NDNS food consumption data for children and restricted to these foods only. However, as the dataset does not aim to have a number of items per group that would be representative of consumption or advertising, this issue would not entail a thorough exploration.	PHE adjusted the NPM test dataset to reflect consumption by children by using NDNS data at category level to derive weighting factors for foods from Kantar Worldpanel. These weights were then used to adjust the ranking of the foods from the Kantar Worldpanel database. Further details are provided in <i>Appendix: NPM test dataset – processes involved in its development</i> . In practice there are no food categories which are exclusively consumed by children. Therefore, PHE is confident that all commonly consumed foods have been included.
		2.2	Hard to tell whether the NPM test dataset reflects a reasonable proxy for foods and drinks likely to be consumed by children. Most children will also access adult foods therefore would be good to see if the criterion applied would elicit different results for adults. It would be desirable for most adult foods to be covered too. Whether the dataset would be equally applicable to people of all ages is questionable. If applicable to adults it should include alcoholic drinks.	Data shows that the most commonly purchased products are consumed by both children and adults and hence the NPM test dataset should also reflect the most frequently consumed products by adults. As a starting principle, alcohol is excluded from the remit of the Nutrient Profiling Model. This was not revisited by the expert group.
	3	2.3	Was the Kantar dataset limited to purchases made by households with children? This arguably would provide better representation of foods consumed by children.	The Kantar Worldpanel panel covers 30,000 households and is designed to be representative of all UK shoppers. 25% of households in the panel have one or more children present. The approach of adjusting the Kantar Worldpanel dataset to reflect consumption by children in the NDNS was specifically used to address this issue. <i>Appendix: NPM test dataset – overview of data sources</i> has been updated to reflect this information.
	4	2.4	No comment.	Noted.
	5	2.5	The NPM test dataset seems to reflect a reasonable proxy for food and drinks consumed by children. Suggests more vegetable based products could have been included to allow further reflection on the possibility of including a performance measure on fruit and vegetables.	The NPM test dataset was adjusted to take into account consumption by children using NDNS data at category level to derive weighting factors for the Kantar Worldpanel foods. Fruit and vegetable based products were not commonly consumed by children and therefore these products in the NPM test dataset were weighted to reflect this frequency of consumption. If more fruit and vegetables were included then it would not reflect consumption patterns with impact of biasing the model revision inappropriately. The focus of the review was to update the model to reflect the current UK dietary recommendations, in particular those for free sugars and fibre rather than develop a new model from first principles, the chosen performance measures reflect this focus.
	6	2.6	The NPM test dataset could be a reasonable proxy for food and drinks consumed by children but question whether there is not some test to confirm this (for example using top contributors from NDNS data).	The weighting to take into account consumption by children using NDNS data was integral to the development of the NPM test dataset and therefore this step has already been performed.
		2.7	Main limitation to the dataset is that given the broad product categories (cereal and cereal products for example) all products within a category will have the same adjustment factor even though some individual products within a category will be far less popular than others.	This is a limitation of the datasets used in this manner across the world. Using Kantar Worldpanel as a starting point, however, ensures that the most popular brands are weighted appropriately.
		2.8	Helpful to explicitly mention why this dataset needed to be created (that is, why are branded products necessary).	An explanation of why the NPM test dataset was required can be found in the introductory paragraphs in the <i>Methods of the review</i> section.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
3. Is the rationale behind the development of the performance measures used to assess the performance of the UK NPM 2004/05 and modified versions appropriate?	1	3.1	The approach to set performance measures needs to be pragmatic and based on existing tools as nutrient profiling models do not have a gold standard against which performance can be assessed.	This is the approach that was adopted specifically as there are no existing tools. Hence the performance measures were set to be equal to or more restrictive for sugar, fat and salt and equal to or more permissive for fibre than the original model. This is outlined in <i>Appendix: Rationale for the development of the Nutrient Profiling Model performance measure cut off values</i> .
		3.2	The model modification focuses on sugars and free sugars. However, the performance measure is set at 'same or greater number of foods and drinks should fail'. If 'same number' is included, then the modification of the model would appear unnecessary. Suggested to at least set a numerical objective in order to test the model more effectively - either in absolute value (NO food high in sugar should pass) or relative (-20 % ?) compared with the initial [baseline] model.	The NPM expert group considered setting a numerical objective, however agreed that this would be too arbitrary. As detailed in the <i>Assessing model performance</i> section, the approach adopted was to set a performance measure that was relevant in relation to nutrients consumed above UK dietary recommendations, hence the approach taken that the same or fewer foods and drinks should pass the draft 2018 NPM [modified NPM].
		3.3	Some performance measures are based on energy intake of 2000kcal (adult requirement). Suggest adding secondary measures corresponding to recommendations for children's energy intake.	The NPM expert group considered whether or not to use children's age specific energy recommendations, however pragmatically agreed to use 8400kJ (2000kcal) to provide consistency with nutrition labelling regulations and government recommendations on energy intake for everyone aged 11 years and above.
		3.4	Suggested setting a number of reference foods for which the model would be expected to fail/pass to ensure the objective of the model is achieved (a set of 100-200 foods and beverages could be used to test against the expert group's rating for any given food).	The NPM expert group discussed the idea of developing a number of reference products. However, they considered that selecting these products would be too arbitrary and could lead to bias.
		3.5	Consider testing the original [baseline] model and modified models against other nutrient profiles available internationally (for example, World Health Organization model).	The focus of the review was to update the model to reflect the current UK dietary recommendations (in particular, those for free sugars and fibre) rather than develop a new model from first principles. The comparison between different principles would not represent a measure of performance.
	2	3.6	Yes, the rationale behind the development of the performance measures used to assess the performance of the UK NPM 2004/05 and modified versions are appropriate. It also seems desirable to maintain the energy component, protein cap and 'per 100g'.	Noted.
	3	3.7	Yes, the rationale behind the development of the performance measures used to assess the performance of the UK NPM 2004/05 and modified versions are appropriate and consistency with other relevant UK food policy nutrient thresholds (front of pack labelling guidance, soft drinks industry levy) is a strength.	Noted.
	4	3.8	Terms 'nutrient definitions' and 'nutrient criteria' used in text explaining performance measures. Consistency required and term 'criteria' preferable.	Acknowledged and the term 'values' has been adopted throughout the review.
		3.9	More information on the reasons for selecting all the performance measure cut off values beyond free sugars is needed in the main body of the document (and beyond that already provided in the associated appendix).	Information on the reasons for selecting all the performance measure cut off values can be found in the text in the <i>Methods of the review: Assessing model performance</i> section and <i>Appendix: Rationale for the development of the Nutrient Profiling Model Performance measure cut off values</i> .
		3.10	For consistency, express the text and table relating to the pass rate for foods and drinks against selected performance measures for the UK NPM 2004/5 (baseline) and the modified NPM in the same terms as the performance measures (that is, fail, not pass). Alternatively, modify the performance measure to refer to passing, not failing.	All the performance measures have been changed to refer to passing the draft 2018 NPM [modified NPM] and are consistent with text and tables relating to the pass rate of foods and drinks against selected performance measures.
	4 & 6	3.11	The use of primary, secondary, tertiary terminology in relation to the performance measures implies a ranked order of importance. Is this correct and, if so, why is saturated fat and salt ranked higher than fibre?	The reason this terminology was used was for the ease of the reader. Saturated fat and salt were not ranked higher than fibre. The relevant text has been reviewed and amended to state 'primary performance measures' and 'other performance measures' to avoid confusion.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
	5	3.12	The addition of performance measures to increase the intake of fruit and vegetables, particularly the latter, should be included as: <ul style="list-style-type: none"> - NDNS data shows only 10% boys and 7% girls meet 5 A Day recommendations) - The current fibre scores tend to reflect cereal and cereal product content of the diet rather than the fruit and vegetable content - Although increasing fruit and vegetables should not be allowed to bias the outcome and mask the overall score of foods and drinks high in salt, sugar and fat this issue could be managed through an appropriate scoring system 	The focus of the review was to update the model to reflect the current UK dietary recommendations (in particular those for free sugars and fibre), rather than develop a new model from first principles. The performance measures reflect this focus. Few products contain sufficient fruit and vegetables to increase the likelihood of achieving a pass score, so a performance measure for fruit vegetables would have been unlikely to have changed the outcome. This has been reflected in <i>Appendix: Rationale for the development of the NPM performance measure cut off values</i> .
		3.13	Surprised by the level of accuracy attributed to the measurement of 'high in free sugars' in table 2 (ie greater than 3.125g/100ml). Questions the credibility of this level of accuracy rather than to decimal points instead (that is, 3.13g/100ml).	For the purpose of the modelling 3.125g was used but it is acknowledged that this represents a somewhat spurious level of accuracy so have changed this to 3.13g in the 2018 review document.
	6	3.14	Choice of performance measures novel and very relevant. Further rationale for choosing could be taken from the recognition that the NPM results should, for the most part, reflect the magnitude of the change in dietary recommendations (example provided for free sugars).	As detailed in the <i>Assessing model performance</i> section, the approach adopted was to set a performance measure that was relevant in relation to nutrients consumed above UK dietary recommendations, hence the approach taken that the same or fewer foods and drinks should pass the draft 2018 NPM [modified NPM].
4. Are the performance measures used appropriately in decision making?	2 & 3	4.1	Yes.	Noted.
	4	4.2	What purpose does modification 2 serve (other than showing a stepwise reduction in total sugars)? Do the criteria for modification 2 align well with the Eatwell Guide?	Further clarification to explain that modification 2 uses a derivation representing total sugars within the refreshed Eatwell Guide, which reflects government recommendations including those for free sugars (equivalent to total sugars: 18% food energy intake) has been added.
		4.3	The cut off values for 'high in saturated fat' and 'high in salt' performance measures needs better explanation as they were not subject to SACN revised recommendations.	Further clarification around the cut off values for 'high in saturated fat' and 'high in salt' has been added to the review and an explanation that other performance measures including saturated fat, salt and fibre were included in order to guard against unintended consequences of the modelling.
	5	4.4	Found the primary performance measures for making decisions on sugars rather weak and considered that the current measure should have allowed either modification 2 or 3 to be chosen as both achieved the parameters. Suggested revised wording relating to the primary performance measure for sugars to reflect this.	Overall reviewers considered the performance measures for sugars appropriate. The group considered both models but on reflection and after further testing agreed to concentrate on modification 3. This is described in the <i>Decisions on sugar modelling (modifications 1, 2 and 3)</i> section.
	6	4.5	Yes and the summary provided helps to illustrate this.	Noted.
		4.6	Consider including (either in the 'decisions of ... modelling' sections or in the 'agreed outcome' boxes) an explicit reference back to the performance measure for this proposed modification.	The boxes are intended to briefly summarise the agreed outcome made for the particular nutrient/food component. Adding the rationale for each decision simply duplicated text immediately preceding the conclusion box and was therefore not amended in the final report.
		4.7	Questions why other forms of validation were not considered (as recommended in the WHO Guiding Principles and Framework Manual for the development and adaption of nutrient profiling models). For example, has comparing the NPM ratings of foods to those recommended for a healthy balanced diet, as depicted in the Eatwell Guide, been considered? This would highlight obvious contradictions. Suggests another form of validation could be to compare the NPM ratings with the views of nutrition professionals.	The expert group terms of reference did not include validation of the draft 2018 NPM [modified NPM]. The UK NPM 2004/5 was subject to views of nutrition professionals in its development the expert group, felt rather than repeat these steps, the use of performance measures would also be more objective. The Eatwell Guide does not recommend specific foods and drinks are to be consumed, rather it refers to food groups. The Eatwell Guide does not contain composite foods. In addition, not all foods depicted in the Eatwell Guide will be advertised to children. Therefore, this approach was not considered necessary.
5. Are the methods of the UK NPM 2004/5 review well defined	1	5.1	Not all methods are described - no mention is made of the 'in depth' analysis methods.	Clarification around what further analysis is referring to has been provided in the <i>Analysis of model modifications</i> section including how the model modifications were part of an iterative process.
		5.2	The rational of the modifications should be included in the methods section.	As the modifications were part of an iterative process the rationale for each was presented in subsequent sections to avoid any perceived bias. A statement has been included in the <i>Analysis of model modifications</i> section to emphasise this point.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
and appropriate to the aims of the review?	2	5.3	Yes. Considered an appropriate starting point.	Noted.
	3	5.4	Yes. They are suitable for review of a dichotomous (pass/fail) NPM such as this.	Noted.
	4	5.5	Not clear why modification 2 was included if a key aim is that fewer foods high in free sugars should be advertised to children.	Further clarification to explain that modification 2 uses a derivation representing total sugars within the refreshed Eatwell Guide, which reflects government recommendations including those for free sugars (equivalent to total sugars: 18% food energy intake) has been added.
	4	5.6	The only place where the basis for the 3 modifications is listed is in <i>table: Dietary Reference Values and derivatives of Dietary Reference Values used for developing the 'A' nutrients for the UK NPM 2004/5 and modifications 1, 2 and 3</i> . A description of the selected modifications and their rationale is needed in the body of the text.	PHE acknowledges presenting all the different modifications has been complicated, however, the information provided in <i>table: Dietary Reference Values and derivatives of Dietary Reference Values used for developing the 'A' nutrients for the UK NPM 2004/5 and modifications 1, 2 and 3</i> is described in the text in subsequent sections. For ease of reading the descriptions in the table have been retained and table numbers have been added to the <i>summary map outlining the modifications made to the UK NPM 2004/5 and nutrient/food values for the draft 2018 NPM</i> to help guide the reader.
	4	5.7	The section <i>Fibre Modelling</i> which describes the approaches taken in the main text could be improved. Adopting a fibre reference value and proportionally adjusting the baseline model to reflect this are not independent steps. There is no mention of considering a fibre reference value relevant to the age group. Text relating to application of 20% to the higher dietary reference value for fibre requires clarification.	Further clarification has been provided in the section on <i>Fibre modelling</i> .
	5	5.8	Yes all but the one on fruit and vegetables.	The focus of the review was to update the model to reflect the current UK dietary recommendations (in particular those for free sugars and fibre) rather than develop a new model from first principles.
6. Are the modifications to the UK NPM 2004/5 explained clearly?	6	5.9	Yes, the methods are well defined and appropriate.	Noted.
	1	6.1	The lines sodium/salt should be combined in the <i>Dietary Reference Values and derivatives of Dietary Reference Values used for developing the 'A' nutrients for the UK NPM 2004/5 and modifications 1, 2 and 3</i> table. Indeed, 2.4g of sodium = 6g of salt. Therefore, the basis is the same.	The <i>Dietary Reference Values and derivatives of Dietary Reference Values used for developing the 'A' nutrients for the UK NPM 2004/5 and modifications 1, 2 and 3</i> table shows which criterion is used and so have distinguished between sodium and salt as sodium does not apply in the modifications. PHE appreciates that the maximum salt intake reference value of 6g salt (or 2.4g sodium) is still being used. This is further described in the <i>Testing of modifications to the UK NPM 2004/5</i> section on sodium.
		6.2	The various names to the modifications (that is M3d, M3 e-g etc) are very hard to follow. A table setting out the detailed modifications would be helpful early on in the document.	Table numbers have been added to the <i>Summary map outlining the modifications made to the UK NPM 2004/5 and nutrient/food values for the draft 2018 NPM</i> to help guide the reader.
		6.3	The rationale should be moved to the <i>Analysis of model modifications</i> section and only the final changes agreed should remain in the section <i>Testing of modifications to the UK Nutrient Profiling Model 2004/5</i> .	As the modifications were part of an iterative process they are presented in subsequent sections to avoid any perceived bias. Further clarification has also been included in the <i>Analysis of model modifications</i> section.
		6.4	Although the model appears to have been modified, the thresholds set to fail/pass did not. The modification of the final threshold should also be included in the review, as it may have greater impact than the modification of the model to the final decisions.	The scope of the 2018 review of the UKNPM 2004/5 focused on updating the model to reflect the current UK dietary recommendations, in particular those for free sugars and fibre rather than developing a new model from first principles. The expert group discussed modification to the final threshold and a decision was made not to change the overall score as it was beyond the scope of the 2018 review.
	2	6.5	They are clearly in line with the SACN carbohydrate report. However, they are not in line with SACN recommendations in the Iron report to limit red and processed meat. If these products are promoted to children (or indeed adults) is this really desirable?	The scope of the 2018 review of the UKNPM 2004/5 focused on updating the model to reflect the current UK dietary recommendations, in particular those for free sugars and fibre rather than developing a new model from first principles. The UK NPM 2004/5 takes an all foods and drinks approach rather than a category specific approach therefore comments which relate to specific foods like red meat do not apply and was beyond the scope of the 2018 review.
	3	6.6	The rationale for extending the scale for fibre to an eight-point scale (compared to five-point scales for other 'beneficial' components) is not clear. It is stated that doing so resulted in slightly	The updated UK dietary recommendations for fibre [aimed to increase average adult population intakes to 30g AOAC fibre per day compared to 18g non starch polysaccharides; equivalent to 24g AOAC fibre] is based on evidence from the July 2015 Scientific Advisory Committee on Nutrition's

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
			more foods which are either low or high in fibre gaining positive points for fibre. It is unclear how more foods low in fibre gaining positive points supports the proposed extension to the scale.	report <i>Carbohydrates and Health</i> . An 8 point scale was used to recognise the contribution of foods which contain a 'source of fibre' by enabling them to score more points and to also enable maximum score of 20% of the DRV in line with other 'C' nutrients.
	4	6.7	The dietary reference values and derivatives of dietary reference values used need to be expressed in grams as appropriate (for free sugars and saturated fat for example).	The dietary reference values and derivatives of dietary reference values used in the draft 2018 NPM [modified NPM] have been expressed in grams.
	4	6.8	The <i>testing of modifications to the UK Nutrient Profiling Model 2004/5</i> section needs to include reasons why the energy DRV needed to be revised (when SACN's revision of sugars and fibre is the key driver). The introduction mentions the revised energy reference values (2011) in the context of the childhood obesity plan but these are not similarly listed as a SACN recommendation.	The 2018 review document has been amended to reflect this comment. Following SACN's 2011 recommendations on energy, the UK Government considered whether to adopt these. In light of the high levels of overweight and obesity in the UK population, the government continues to advise an energy recommendation of 2500kcal for males and 2000kcal for females aged 11 to 64 years. The latter was used for the draft 2018 NPM [modified NPM], consistent with food labelling regulations and government population advice for everyone over the age of 11 years.
	4	6.9	Further explanation required for the selection of the energy value as a labelling value rather than SACN's revised energy recommendations.	Following SACN's 2011 recommendations on energy, the UK Government considered whether to adopt these. In light of the high levels of overweight and obesity in the UK population, the government continues to advise an energy recommendation of 2500kcal for males and 2000kcal for females aged 11 to 64 years. The latter was used for the draft 2018 NPM [modified NPM], consistent with food labelling regulations and government population advice for everyone over the age of 11 years. This explanation has been reflected in the 2018 review document.
	4	6.10	The <i>Testing of modifications to the UK Nutrient Profiling Model 2004/5</i> section does not explain why modification 1 was not tested.	The <i>Summary map outlining the modifications made to the UK NPM 2004/5 and nutrient/food values for the draft 2018 NPM</i> shows the order of modifications carried out. Modification 1 was tested at the outset in relation to total sugars and was discounted early in the process as it reflected previous sugar recommendations. The modifications made to the nutrients are explained in order of A and C nutrients and each taken in turn.
	4	6.11	Expressing results in terms of 'failing' then 'passing' in the section <i>Results of sugar modelling (modification 1, 2 and 3)</i> is hard to comprehend.	All the performance measures have been changed to refer to passing the draft 2018 NPM [modified NPM] and are consistent with text and tables relating to the pass rate of foods and drinks against selected performance measures.
	4	6.12	For sodium/salt modifications set out within the <i>Testing of modifications to the UK Nutrient Profiling Model 2004/5</i> section, extending the scoring bands is new information. The associated appendix shows the same scoring bands for salt as for other 'A' nutrients and therefore why was extending these considered?	Extending the scale for salt/sodium was originally considered by the expert group when they looked at the population's salt intake and felt that extending the scale could be a driver to help reduce intakes. However, the expert group felt it should be consistent with the other A nutrients and it was agreed not to extend the scale. A sentence around extending the scale for salt has been included to explain why the Expert Group considered it.
	4	6.13	<i>Decisions of fibre modelling</i> section: Explain further why (n) was pragmatically chosen over (o) given they both have the same impact.	The expert group reached a consensus that M3n would be the draft 2018 NPM [modified NPM]. An 8 point scale was used to recognise the contribution of foods which contain a 'source of fibre' by enabling them to score more points which also enable maximum score of 20% of the DRV in line with other 'C' nutrients which M3o did not allow. The reasons for choosing M3n are detailed in the <i>Decisions of fibre modelling (modifications 3: e, f, g, h, i, j, k, l, m, n, o, p)</i> section.
	4	6.14	Re-word the text relating to what impact the modified NPM had on the performance measures so that the primary comparator is the modified NPM. (For example, 'a greater number of foods and drinks high in total sugars fail the modified NPM than UK NPM 2004/5').	The primary comparator has been changed from modification 3 to draft 2018 NPM [modified NPM] in the <i>Summary of the changes to the draft 2018 NPM</i> section.
	5	6.15	While most of the modifications are clearly explained the fibre modifications were the most difficult to understand, partly because there are so many. Suggest that, in the title of the 'modifications and rationale' tables, the overall context of the 3 analyses under review are included. Also recommend a further review the associated general text to see if this could be improved.	The tables describing the 'modifications and rationale' for fruit, vegetables and nuts, and fibre have been clearly labelled as to which modification 2 or 3 the modification is referring to. The introductory paragraph in the fibre modelling section gives a summary of all the different fibre modelling options.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
	6	6.16	A very good job done of describing such a complex model and the many modifications that were being considered. The stepwise process to explain the impact of each change shows transparency. The consistent format that is used to walk the reader through all the approaches that were considered, followed by the details of the modifications and decisions made was very appreciated and for the most part very clear.	Noted.
		6.17	Suggested moving the <i>Summary map outlining the modifications made to the UK NPM2004/5 and nutrient/food values for the modified NPM</i> to after the tables setting out the modifications – as considered that the map does not ‘stand alone’ and requires more knowledge of what was tested and the abbreviations of the different modifications.	Other reviewers thought the <i>Summary map outlining the modifications made to the UK NPM2004/5 and nutrient/food values for the draft 2018 NPM [modified NPM]</i> was useful in its current location; therefore this remains at the beginning of the <i>Testing of modifications to the UK NPM 2004/5</i> section and now also includes table numbers so the reader can refer to the table which describes the modification.
	6 & 4	6.18	Further explanation on the choice of point scales and ‘score bands’ is needed. (For example, whether these were based on pragmatic decisions or chosen following tests that indicated these increments were able to discriminate between products). This is lacking for most point scales. For some instances, this was perhaps explained further in documentation for the UK NPM 2004/5	Appendix: <i>Population DRV and derivatives of DRV s for children aged 11-16yrs used for developing the UK Nutrient Profiling Model 2004/5</i> now includes further clarification around the score bands in the score bands column. In the <i>Development of the UK Nutrient Profiling Model 2004/5</i> section the following reference has been included which explains the rationale for the score bands point scale: <i>Rayner M, Scarborough P, Stockley L. (2004) Nutrient Profiles: Options for definitions for use in relation to food promotion and children’s diets. London: Food Standards Agency.</i>
7. Are the summary tables presented clearly to enable the reader to understand the data used by the expert group to make its decisions?	1	7.1	The fibre modifications are very important but not always very clear. In particular, it is unclear why the earlier DRV was included in the review given that the overarching goal is to update the model to reflect current recommendations. It is also unclear how the derived values associated with the ‘l-o’ modifications were obtained (which includes the final model used – M3n).	<i>Table: Details of fibre modifications (modification 2 and 3 e, f, g) and rationale</i> contains the rationale for why the previous DRV of 24g fibre was used. 24g is close to the current DRV for those aged 11-16years (25g AOAC/day). The footnote under <i>table: Details of fibre modifications (modification 3: h,i,j,k,l,m,n,o,p) and rationale</i> explains how the derived value was obtained. ‘The ‘derived value’ based on DRVs for modifications ‘l’, ‘m’, ‘n’ and ‘o’ was calculated as a ‘proportional change’ by taking 24g (previous DRV for fibre) divided by 30g (current DRV for fibre) = 0.8. A multiplier of 0.8 was applied to the UK NPM 2004/5.
		1	7.2	In the results tables and text using the relative percentage change as the main outcome when considering foods and drinks that pass the UK NPM 2004/5, (Baseline) and the modified NPM against selected performance measures is misleading in some cases where the initial number of products above/below the threshold is very low. In these instances (for example, the high saturated fat threshold) maintaining the actual number, rather than the percentage, would be required. In addition for each modification the number of fail/pass is 100% of the total number, suggest only keeping one, to ensure that the comparison across models is more understandable.
	2	7.3	Yes. Not considered an easy task but cannot see another way of presenting this information.	Noted.
	3	7.4	Yes. Most summary tables presented clearly but the larger ones are difficult to review in their entirety.	It is acknowledged that there is a lot of data to present. The fail column in the results table has been removed to help with readability.
	4	7.5	Comments provided on the table providing details of the fibre modifications and rationale: - Too dense - is it necessary to describe so many options (particularly those that vary only one parameter) - Use of rationale column inconsistent (some are descriptions instead) Constant reference to maximum score %.	It is acknowledged that there is a lot of data to present but consider that providing this within a table is the clearest way to do this.
5	7.6	Yes other than the fibre modifications table and the table showing the overall percentage of foods and drinks in the NPM test dataset that pass the UK NPM 2004/5 (baseline), for sugar, fruit, vegetables and nuts and fibre against selected performance measures. For instance, the	It is acknowledged that there is a lot of data to present but consider that providing this within a table is the clearest way to do this. The abbreviations in the table showing the overall percentage of foods and drinks in the NPM test dataset that pass the UK NPM 2004/5 (baseline), for sugar,	

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
			latter needs some changes to provide greater clarity on the model modification column as it currently includes too many abbreviations.	fruit, vegetables and nuts and fibre against selected performance measures are necessary to support the data within the table.
	6	7.7	The figure summarising the differences between the UK NPM 2004/5 and the modified NPM is a great summary. Suggest adding references for the criteria.	An extra column explaining the reference for the criteria has been included in the <i>Summary of the differences between the UK NPM 2004/5 and the draft 2018 NPM</i> figure.
		7.8	<i>Basis of the nutrient/food component and scoring for the UK NPM 2004/5 modified NPM</i> table is somewhat confusing. An illustrative example scoring a product may be useful.	The footnote, on the <i>Basis of the nutrient/food component and scoring for the UK NPM 2004/5 [modified NPM] and the draft 2018 NPM</i> table, now includes a title which explains how to calculate a nutrient profiling score.
		7.9	In the footnotes, does it mean that a food high in fat, sugar or salt (has 4 points or more) cannot be advertised to children? At what score is advertising prohibited? There also seems to be additional rules in the footnotes. For example, if a food or drink scores 11 or more points than it cannot score protein points ...etc.. How were these rules determined? Assume these were from the original nutrient model?	A line explaining that all existing NPM rules apply where modification are not outlined has been included in the <i>Testing of modifications to the UK NPM 2004/5</i> section. There are no additional rules; these were in the original UK NPM 2004/5 guidance. See <i>Appendix: How to calculate a nutrient profiling score using the UK Nutrient Profiling Model 2004/5</i> .
8. Has the review of the UK NPM 2004/5 achieved its identified aims and does the draft 2018 NPM [modified model] reflect the latest UK government dietary recommendation?	1	8.1	The results of the modifications appear to predominantly affect drinks rather than foods, in particular as the performance measure affect predominantly beverages (high free sugars).	Noted.
		8.2	Some additional measures (for example a set of indicator foods) should be added to the review, to ensure the overall consistency of the modified NPM for foods that do not reach the 'high sugar' or 'high free sugars' thresholds, but are still a large source of sugars in the population of children.	The expert group discussed the idea of developing a number of indicator/reference products. However, they considered that selecting these products would be too subjective and could lead to bias.
		8.3	The final modification of the fibre adaptation appears to have somewhat failed its goal, given that the number of foods 'a source of fibre' or 'high in fibre' actually increases. However, the number of foods 'high in fibre' or 'a source of fibre' appear higher in modifications h and j, with no other modifications in the pass/fail percentages. The reason for not choosing the h modification is unclear. Indeed, the computation of the component is more straightforward, and the modification appears more effective. Moreover, the argument whether more foods low in fibre should fail is not acceptable, given that it was not stated in the performance measures of the model in the first place and is not defined in the report. This may relate to the fact that a number of these foods are fortified with fibre rather than this being present naturally. The results should perhaps investigate this point, to see whether the foods which fail with the modified NPM are actually fortified. If so, this would make the failure of this objective less of an issue.	Fewer 'source of fibre' and 'high fibre' foods pass the draft 2018 NPM [modified NPM] compared to the UK NPM 2004/5 due to their sugar content for example breakfast cereals. However a large number of 'source of fibre' foods and 'high fibre' foods still pass the draft 2018 NPM [modified NPM] which passed the UK NPM 2004/5. The difference between the fibre modifications was minimal and the expert group took a pragmatic decision and chose modification n for the reasons listed under the <i>Decisions of fibre modelling</i> in the <i>Methods of the review</i> section. The expert group did not chose j as it was based on the previous DRV and did not choose h (which doubled the points awarded to fibre) as it could be seen as prioritising fibre over the other C nutrients.
	2	8.4	It is surprising that so many low fibre foods ("morning goods") seem to pass the modified NPM model. Interesting to know if a diet comprising these items really meant children could meet current fibre recommendations. Seems curious to have a category of breakfast cereal (high fibre) and other cereals but the same is not done for other starch groupings and indeed many of these white flour products seem to pass the modified NPM. It would be desirable to see validation of this. The reviewer's own estimates suggest that current portions and frequency of refined flour products will not lead to achievement of dietary fibre recommendations and they state that it would be desirable for food industry to see benefits of wholegrain products. Most disappointed that this is not apparent – is this because the model does truly achieve the levels of desirable fibre? Either way some modelling/validation highly desirable. There are some other items that pass the model that might need to be explained (3 instant hot beverages for example).	THE NPM does not aim to by itself achieve UK dietary recommendations; such an approach would not be met for all the nutrients considered. As such, it is not possible to comment on the reviewer's specific observations on foods containing refined carbohydrates'. The expert group considered that the modification that they have recommended provides the best option of trying to promote a higher fibre intake through both lower fibre and higher fibre foods when compared to the UK NPM 2004/5 though overall, as noted by another reviewer, this greater promotion was not apparent. Fewer 'source of fibre' and 'high fibre' foods within specific food categories pass the draft 2018 NPM [modified NPM] compared to the UK NPM 2004/5 due to their free sugar content for example breakfast cereals. However a large number of 'source of fibre' foods and 'high fibre' foods with lower free sugar content, such as some morning goods still pass the draft 2018 NPM [modified NPM] which passed the UK NPM 2004/5.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
	3	8.5	<p>It is difficult to know how to weight better performance of the modified NPM in relation to foods high in free sugars versus (arguably) poorer performance in relation to foods high in fibre. The modified NPM ensures fewer foods high in free sugars pass the model but also that fewer foods 'high in fibre' and that are a 'source of fibre' pass the model. The purpose of the review was to ensure the model reflects current UK dietary recommendations, in particular those for free sugars and fibre, but it seems the modifications are less successful in relation to fibre. Whilst free sugars were the primary performance measure, fibre was nevertheless a tertiary performance measure and it was specified that fewer foods 'high in fibre' or that are a 'source of fibre' should fail the model. This performance measure has not been met and it's problematic to know what implications that has for children's health overall. That is, does the fact that fewer foods high in free sugars can be advertised compensate for the fact that fewer foods high in fibre can be advertised? I think perhaps it would be helpful to present a matrix of products classified based on high and low content of free sugars and fibre (that is, (1) Products low in free sugars and high in fibre, (2) Products low in free sugars and low in fibre, (3) Products high in free sugars and high in fibre, (4) Products high in free sugars and low in fibre), and show how the model performs for each quadrant of the matrix.</p>	<p>The suggestion of presenting a matrix of products which may summarise the outcomes in a different manner is welcomed. Such a presentation would not change the outcome but may aid accessibility. At this time it has not been possible to undertake the required reanalysis to deliver this presentation and have therefore retained the original presentation of the results. It will be considered if the analysis can be completed to better assist the reader at a future time.</p> <p>Fewer 'source of fibre' and 'high fibre' foods within specific food categories pass the draft 2018 NPM [modified NPM] compared to the UK NPM 2004/5 due to their free sugar content for example breakfast cereals. However a large number of 'source of fibre' foods and 'high fibre' foods still pass the draft 2018 NPM [modified NPM] which passed the UK NPM 2004/5.</p>
	4	8.6	<p>Mostly but not with respect to the rationale for the reduction in reference energy for the target group.</p>	<p>The following explanation has been reflected in the review document. Following SACN's 2011 recommendations on energy, the UK Government considered whether to adopt these. In light of the high levels of overweight and obesity in the UK population, the government continues to advise an energy recommendation of 2500kcal for males and 2000kcal for females aged 11 to 64 years. The latter was used for the draft 2018 NPM, consistent with food labelling regulations and government recommendations on energy intake for everyone aged 11 year and above.</p>
	5	8.7	<p>The review of UK NPM 2004/5 has achieved its identified aims other than increasing fibre rich foods and potentially not increasing the nation's fruit and vegetable intake.</p> <p>Concerned to note that the number of high fibre foods that passed reduced from 70% in the current model to 54% - which directionally goes against the selected performance criteria.</p>	<p>Fewer 'source of fibre' and 'high fibre' foods within specific food categories pass the draft 2018 NPM [modified NPM] compared to the UK NPM 2004/5 due to their free sugar content for example breakfast cereals. However a large number of 'source of fibre' foods and 'high fibre' foods still pass the draft 2018 NPM [modified NPM] which passed the UK NPM 2004/5.</p> <p>We note the comment that the draft 2018 NPM [modified NPM] may not achieve an increase in population fruit and vegetable consumption. We are, however, mindful that potentially impractical amounts of fruit and/or vegetables may be required within a particular composite food (such as a lasagne) to positively offset the contribution to scoring from amounts of energy and other nutrients (ie saturated fat, free sugars and salt) within such a food.</p> <p>It is acknowledged that all the fibre modifications operated in a similar manner. The expert group took a pragmatic decision on the criteria they felt best represented the overall aims of the 2018 review.</p>
	6	8.8	<p>Whether NPM reflects the latest UK dietary recommendations would need to be confirmed though additional validation. For example, a comparison of how common foods recommended as part of the EatWell Guide/UK dietary recommendations align with the foods that would be allowed (or not) to be advertised under the modified NPM.</p>	<p>See response/action to comment number 4.7.</p>

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
9. Please include general comments about the clarity of the document, the approach taken to review the NPM 2004/05 and the rationale and appropriateness of the proposed modifications?	1	9.1	Though the model retained two categories (foods and beverages), the algorithm is not modified according to these categories. Though the definition of different thresholds in the final score may lead to the desired effect, it may also lead to inconsistencies, in particular in the case of beverages. Indeed, beverages mainly contain sugars (some fibers, but in low content, and proteins for milk beverages). If the allocation of points is not modified, it leads to the fact that fruit juices pass, even if they contain high amounts of sugars. This decision should be further discussed, and perhaps further adjustment of the model for beverages should be considered. For sugar, I wonder whether a change in the scoring band for total sugars would not lead to the same effect in terms of pass/fail, with the advantage of being based on nutrients in the nutritional declaration, and therefore easier to implement. The rationale for not going this way should be discussed.	See response/action to comment number 6.4.
		9.2	For each nutrient, the score bands are set at 3.75% of the identified recommendation. However, the final scale appears to have various heterogeneous score bands (sometimes 0.2g, sometimes 0.3g for salt). This comment also applies to the saturated fats and free sugars score bands (sometimes 0.9g, sometimes 1g). I would suggest using always the same number, either 0.2 or 0.3 for salt, and either 0.9 or 1g for free sugars and saturates, to ensure consistency with the rationale.	The numbers used for saturated fat and free sugars are based on a percentage of food energy 11% and 5% respectively based on 8400kJ (2000kcal). The values have been rounded to the nearest decimal place. This is consistent with the UK NPM 2004/5 scoring.
	2	9.3	It appears appropriate apart from the fibre issue raised in question 8. Why does the foot note for the <i>Basis of the nutrient/food component and scoring for the UK NPM 2004/5 [modified NPM] and the draft 2018 NPM</i> table refer to NSP and AOAC?	Both NSP and AOAC are referred to in the footnote of the <i>Basis of the nutrient/food component and scoring for the UK NPM 2004/5 [modified NPM] and the draft 2018 NPM</i> table as either value can be used in the model.
	3	9.4	Whilst many of the appendices are indeed suitable as supplements to the main body, there were some that I thought would sit better as part of the main document. The <i>Summary map outlining the modifications made to the UK NPM2004/5 and nutrient/food values for the modified NPM</i> is very complex could perhaps be improved with better labelling.	It is acknowledged there is a lot of information contained in the review including the appendices and it is considered that using the appendices helps to maintain the flow of the review and not lose the detail. Table numbers have been added to the <i>Summary map outlining the modifications made to the UK NPM 2004/5 and nutrient/food values for the draft 2018 NPM [modified NPM]</i> to help guide the reader.
	5	9.5	No further comments.	Noted.
	6	9.6	Overall, the document does contain most of the information necessary to understand the process. However, perhaps you could include a short description as to how the “high” criteria were determined. For example, in the <i>Guide to creating a front of pack (FoP) nutrition label for pre-packed products sold through retail outlets (pg 19)</i> it appears as though > 25% of the RI is “high”. Information on how the 25% was chosen would be appreciated.	The current review did not change the underlying principles from the UK NPM 2004/5 and the basis of this descriptor is provided in background documents cited in relation to that model. This includes the reference to the 25% as highlighted by the reviewer. Additional information on this was not added to this review since this might suggest a revision of this basis and equally a larger number of underlying criteria might then have come into scope which would have extended the text considerably with potential additional confusion.
10. Are the appendices clearly presented? Is there additional information that would support greater understanding	1	10.1	The responses to the questions include comments about the relevant appendices.	Noted.
	2	10.2	See response to question 1.	See response/action to comment number 1.5.
	3	10.3	See response to question 8 around a more detailed examination of performance of the model for free sugars and fibre combined.	See response/action to comment number 8.5.
	4	10.4	Add max score % for A and C nutrients in score bands column to <i>Appendix: Population DRVs and derivatives of DRVs for children aged 11-16 years used for developing the UK NPM 2004/5</i> .	<i>Appendix: Population DRVs and derivatives of DRVs for children aged 11-16 years used for developing the UK NPM 2004/5</i> amended to include the maximum score % for A and C nutrients in the score bands column.
	4	10.5	Suggested amends to the <i>Appendix: Summary of International Nutrient Profiling Models</i> .	<i>Appendix: Summary of International Nutrient Profiling Models</i> was reviewed to reflect the suggested changes.
	5	10.6	No further background required.	Noted.

Question	Peer reviewer number	Comment number	Peer review summary comments	Response/Action
of the work undertaken to complete the review?	6	10.7	There is very detailed information in the appendices and I can imagine it was very challenging to condense all this information. For the most part, I think you did a great job. I have noted throughout some areas where additional explanations would be appreciated.	Noted.
			In the final product, providing links to the appendices embedded in the document would be appreciated and facilitate the back and forth while viewing the document. Wherever possible providing links to remind the reader that there is an appendix that relates to the topic would be helpful. There are so many details in the document it is easy to forget what is there!	The document will form part of a consultation pack called the 2018 consultation on the review of the UK's Nutrient Profiling Model. Links may be possible as the document will be available on the GOV.UK.
			In Appendix B – are the energy EARs estimated assuming a sedentary level of physical activity?	Previous DRV for energy described in 'Department of Health. (1991) Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Report on Health and Social Subjects No 41. London: HMSO.' And the revised SACN recommendations (2011) both set energy requirements at a sedentary level. Following SACN's 2011 recommendations on energy, the UK Government considered whether to adopt these. In light of the high levels of overweight and obesity in the UK population, the government continues to advise an energy recommendation of 2500kcal for males and 2000kcal for females aged 11 to 64 years. The latter was used for the draft 2018 NPM (consistent with food labelling regulations and government recommendations on energy intake for everyone aged 11 year and above) would also be considered to be at a sedentary level of physical activity.
11. Do you have any other general comments?	1	11.1	The 5-Colour Nutrition Label (5-CNL) is the former graphical format of the French labelling system, which is now named Nutri-Score. The information provided on the modification of the algorithm in the review document corresponds to early research. The final modifications are detailed in a report, available at www.hcsp.fr/explore.cgi/avisrapportsdomaine?clefr=519	The additional information provided has been acknowledged and included under <i>Appendix: History of the UK's Nutrient Profiling Model 2004/5</i> .
	1 & 5	11.2	The key modification of the model is the change from total sugars to free sugars. The SACN report clearly articulates the health benefits of a population reduction in free sugars, however including free sugars in the final model is not consistent with labelling and therefore poses questions as to the transparency of the model or its actual implementation by manufacturers. This should be further discussed and justified.	In this case, the group considered consistency with UK free sugar recommendations were more appropriate than consistency in labelling. This was a pragmatic view to emphasise the change in government advice and that use of total sugar masks the inclusion of free sugars in some products.
	2	11.3	There is a need to feel satisfied that the foods that pass the modified NPM are ones which we would wish to see promoted to children. Testing the model with lay people would be desirable.	The UK NPM 2004/5 was subject to views of nutrition professional in its development and the expert group felt rather than repeat these steps or develop a number of reference products; it would be more objective to use performance measures.
	3,4 &6	11.4	A number of typographical, grammatical and referencing errors are identified.	The typographical, grammatical and referencing errors are acknowledged and corrected/amended where identified.
	5	11.5	Whey powder is included in the definition of free sugars. Some of the whey powder used by industry is unsweetened and therefore should not be included in free sugars. In addition, there is no mention of sugars like agave sugar and malt sugar. Some of these fruit leathers I understand are quite high in free sugars and there is uncertainty whether fruit leather should be included in the 'excluded from free sugars' category. The list that will be published needs to be more extensive.	The Scientific Advisory Committee on Nutrition (SACN) stated that lactose naturally present in dairy products should be excluded from the definition of free sugars but the lactose extracted from milk and milk products and added to foods or drinks should be considered free sugars. Whey powder is considered to be an ingredient derived from dairy products rather than a dairy product itself. Therefore the lactose added to foods and drinks in the form of whey powder is considered as free sugars in the same way that lactose added as an ingredient itself is considered as free sugars. Agave sugar and malt sugar are included in the free sugars definition and covered by the description 'all added sugars in whatever form'. It depends how fruit leathers are made as to whether they are included in or excluded from free sugars, they are excluded if it is made from dried pressed fruit but included if made from extruded fruit. The PHE working definition of free sugars for the purpose of the review of the NPM has been amended to reflect this in <i>Appendix: NPM test dataset – estimating free sugars</i>
	6	11.6	Are there plans to create a shorter summary document that highlights only the proposed modifications and a brief rationale?	A summary of the proposed changes will be included as part of the consultation package of the 2018 review of the UK NPM.

